

**METHODS OF FABRICATING CONTACTS FOR SEMICONDUCTOR  
DEVICES UTILIZING A PRE-FLOW PROCESS AND DEVICES MADE  
THEREBY**

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Abstract of the Disclosure

Methods for fabricating a contact of a semiconductor device are provided by  
patterning an interlayer dielectric of the semiconductor device to form a contact hole  
that exposes a silicon-based region of a first impurity type. The exposed silicon-based  
region is doped with a gas containing an element of the first impurity type and a  
10 contact plug is formed in the contact hole. Contact structure for a semiconductor  
device are also provided that include an interlayer dielectric of the semiconductor  
device having a contact hole formed therein that exposes a silicon-based region of a  
first impurity type. A delta-doped region of the first impurity type is provided in the  
exposed silicon-based region. A contact plug is provided in the contact hole and on  
15 the delta-doped region.